What is claimed is:

1. A method for synchronizing internal clocks of receiving stations of a system, comprising the steps of:

transmitting a reference data packet from a beacon at a known position;

comparing a first arrival time and a second arrival time to determine a correlated arrival time data, the first arrival time being a time of reception of the reference data packet by a first receiving station, the second arrival time being a time of reception of the reference data packet by a second receiving station;

computing a linear polynomial fit as a function of the correlated arrival time data and the first and second arrival times; and

synchronizing the first and second arrival times of the reference data packet at the first and second receiving stations as a function of the linear polynomial fit.

2. The method according to claim 1, wherein the computing step includes the substeps of:

assuming equal distances between the beacon and the first and second receiving stations, computing a slope and a y-intercept of the correlated arrival time data; and

computing a bias of the correlated arrival time data as a function of known distance differences between the beacon and the first and second receiving stations.

3. The method according to claim 2, further comprising the step of:

repeating the comparing and computing steps for third and fourth receiving stations to determine a further slope, a further y-intercept and a further bias for the third and fourth receiving stations.

4. The method according to claim 2, further comprising the step of:

repeating the comparing and computing steps for a third receiving station in conjunction with the first receiving station to determine a further slope, a further y-intercept and a further bias for the first and third receiving stations.

5. The method according to claim 3, further comprising the step of:

correcting an arrival time difference between the first and second receiving stations and the third and fourth receiving stations as a function of an arrival time of a first data packet sent by a mobile device and a slope, a y-intercept and a bias computed for first and second pairs of the receiving stations, each of the first and second pairs including any two stations of the first, second, third and fourth receiving stations, the first pair including at least one receiving station which is not included in the second pair.

6. The method according to claim 2, further comprising the step of:

repeating the transmitting, comparing and computing steps to update synchronization of the internal clocks of the receiving stations at a predetermined rate.

7. A method for determining a location of a mobile device, comprising the steps of:

synchronizing internal clocks of receiving stations;

receiving a data packet from the mobile device by first and second receiving stations of the receiving stations;

determining a synchronized arrival time of the data packet at the first and second receiving stations;

calculating an arrival time difference between the first and second receiving stations; and

computing the location of the mobile device, using a hyperbolic trilateration, as a function of the synchronized arrival time.

8. The method according to claim 7, further comprising the step of:

determining a corresponding synchronized arrival time for at least first and second pairs of the receiving stations, each of the first and second pairs including any two

of the first receiving station, the second receiving station, a third receiving station and a fourth receiving station, the first pair including at least one receiving station which is not included in the second pair.

9. The method according to claim 7, further comprising the step of:

determining a corresponding synchronized arrival time for at least first, second and third pairs of the receiving stations, the first, second and third pairs of the receiving stations including any two of the first receiving station, the second receiving station, the third receiving station, the fourth receiving station, a fifth receiving station and a sixth receiving station, the first pair including at least one receiving station which is not included in the second and third pairs, the second pair including at least one receiving station which is not included in the third pair.

10. The method according to claim 7, wherein the synchronizing step includes the substeps:

transmitting a reference data packet from a beacon at a known position;

comparing a first arrival time and a second arrival time to determine a correlated arrival time data, the first arrival time being a time of reception of the reference data packet at the first receiving station, the second arrival time being a time of reception of the reference data packet by the second receiving station;

computing a linear polynomial fit as a function of the correlated arrival time data and the first and second arrival times; and

synchronizing arrival time of the reference data packet at the first and second receiving stations as a function of the linear polynomial fit.

11. A system for synchronizing internal clocks of a mobile device locating network, comprising:

receiving stations having the internal clocks;

a processor connected to the receiving stations; and

a beacon adapted for transmitting to the receiving stations a reference data packet, the beacon having a known location,

wherein each of the receiving stations is adapted to forward arrival times of the reference data packet to the processor, and wherein the processor is adapted to compute a linear polynomial fit of the arrival times to synchronize a time of arrival of data packets received from a mobile device.

12. The system according to claim 11, wherein the receiving stations includes are divided in pairs and wherein at least two pairs are used to locate the mobile device.

13. The system according to claim 11, wherein the processor receives first and second arrival times, the first arrival time being a time of reception of the reference data packet by a first receiving station of the receiving stations, the second arrival time being a time of reception of the reference data packet by a second receiving station of the receiving stations, wherein the processor comparing the first arrival time against the second arrival time to determine a correlated arrival time data, wherein the processor computes a slope and a y-intercept as a function of the correlated arrival time data and the first and second arrival times, assuming equal distances between the beacon and the first and second receiving stations, and wherein the processor computes a bias of the correlated arrival time data from known distance differences between the beacon and the first and second receiving stations.

14. A method of synchronizing internal clocks of receiving stations of a locating system, comprising the steps of:

transmitting a reference data packet from a beacon at a known position;

comparing an arrival time of the reference data packet at each of a first pair of receiving stations to determine compared arrival time data;

computing a linear polynomial fit as a function of the compared arrival time data and the arrival times at each of the first pair of receiving stations; and

synchronizing arrival times of the reference data packet at the first pair of receiving stations as a function of the linear polynomial fit.

15. The method according to claim 14, further comprising the steps of:

comparing an arrival time of the reference data packet at each of a second pair of receiving stations to determine compared arrival time data;

computing a linear polynomial fit as a function of the compared arrival time data and the arrival times at each of the second pair of receiving stations; and

synchronizing arrival times of the reference data packet at the second pair of receiving stations as a function of the linear polynomial fit.

16. The method according to claim 15, wherein a first one of the receiving stations is included in both the first and second pairs of receiving stations.

17. The method according to claim 15, wherein the first pair of receiving stations includes first and second receiving stations and the second pair of receiving stations includes third and fourth receiving stations.